

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

JOANNE HART and SANDRA BUENO, on behalf
of themselves and all others similarly situated,

Plaintiffs,

v.

BHH, LLC d/b/a Bell + Howell and VAN HAUSER
LLC

Defendants.

Civil Action No. 1:15-CV-04804-
WHP

**MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFFS' MOTION TO PRECLUDE
THE EXPERT TESTIMONIES OF DR. PAUL BORTH AND DR. PHILIP WHITFORD**

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I. INTRODUCTION

Defendants' proffered expert witnesses, Dr. Paul Borth and Dr. Philip Whitford, base their opinions in this case on a series of seven tests performed on the Bell + Howell repellers which were commissioned by Defendants and conducted in China (the "Chinese Studies"). But the problem with the Chinese Studies is that they are not sufficiently reliable under Fed. R. Evid. 702. This is evident from the testimony of Dr. Borth himself, who had years of experience analyzing studies just like these in the course of his employment at the Dow Chemical Company:

Q: In the course of your work at Dow, would you have relied on the ... Chinese studies that we just discussed in making a determination that the product would be effective inside people's residences?

A: I would not have relied on those studies solely to fulfill my obligation to Dow.

Q: Why not?

A: Because they are – well, for the reasons we pointed out. They ... could have been done better. They could have been – or else you have to have other tests that are done, replicated, there's a control, the species [is specified].

Q: Would the totality of the data you've seen on the effectiveness of the Bell + Howell repellers ... have been sufficient for you to commercialize this product for use in residences with Dow?

...

A: No.

Kopel Decl. Ex. 1, Borth Dep. at 179:17-182:18.

Q: Would you have relied on a test like this in the course of your work at Dow?

A: No.

Q: Why not?

A: Too many unanswered questions.

Q: So why are you more comfortable in the course of your work here relying on it?

A: Because the – I – because I’ve worked in Dow Chemical. I know the rigor with which they require their data to be used and analyzed. I don’t know the rigor from [the] Bell + Howell case – or the Bell + Howell culture.

Id. at 146:23-147:10. Dr. Borth similarly testified that the studies could not withstand the scrutiny of peer review:

Q: Do you believe that if submitted for publication in a peer-reviewed journal, the Chinese studies conducted on the Bell + Howell repellers would be potentially selected for publication?

A: No ...

Id. at 309:19-310:4. Thus, Dr. Borth has testified that he would not have relied on the Chinese Studies in his regular professional work at Dow or as an independent scientist. Yet, he and Dr. Whitford seek to stand in front a of jury of laypersons, who will regard them as authorities on this subject matter, and testify that the jury should rely on those very same studies in rendering a decision in this case. This is the precise sort of testimony that Rule 702 is designed to prevent. *See Sheehan v. Daily Racing Form, Inc.*, 104 F.3d 940, 942 (7th Cir. 1997) (“*Daubert* ... requires the district judge to satisfy himself that the expert is being as careful as he would be in his regular professional work outside his paid litigation consulting.”).

Moreover, the testimonies of Dr. Borth and Whitford are not helpful to the trier of fact in this case because their actual opinions do not bear on any real-world situations in which consumers could be expected to use the pest repellers in any residential or commercial environment:

Q: Have you seen evidence that the Bell + Howell ultrasonic pest repellers are capable of pest control inside of a residential environment?

...

A: No.

...

Q: Now, have you seen evidence that the Bell + Howell Ultrasonic pest repellers are capable of driving pests out of a house?

A: No.

...

Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of driving pests out of a living space?

A: No.

Q: Have you seen evidence that the ... Bell + Howell ultrasonic pest repellers are capable of being effective beyond a period of nine days?

...

A: I have not.

Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a carpeted room?

A: No.

Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a room with furniture in it?

A: No.

Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a room with a bed in it?

A: No.

Kopel Decl. Ex. 1, Borth Dep. at 43:12-51:24; *see also id.* Ex. 2, Whitford Dep. at 226:22-227:9

(“Q: Have you seen anything from this test to imply that the repellers are capable of driving

these pests out of the house? A: The test only covers ... a 32 square foot area. How can you answer that larger question on the basis of that small of a sample?”). But real people live in houses with carpets and beds and furniture, not in the empty 32 square foot plexiglass enclosures used in the studies:

Q: ... [A]s it pertains to the manner in which people would typically use ultrasonic pest repellers, you wouldn't typically expect them to be using them inside plexiglass enclosures, would you?

...

A: I would not.

Q: It would be reasonable to assume that they would use them in their homes, correct?

...

A: Yes.

Q: And people don't live in plexiglass containers, do they?

A: Not most of the ones I know.

...

Q: And plexiglass containers don't have furniture, correct?

A: Correct.

...

Q: And furniture is something that could affect the efficacy of ultrasonic devices, correct?

A: True.

Q: And plexiglass containers do not have ... carpeting, correct?

A: One assumes not.

Q: And carpeting could affect the efficacy of ultrasonic devices, is that correct?

A: Yes.

Kopel Decl. Ex. 2, Whitford Dep. at 82:18-85:23.

Defendants' experts are apparently under the misconception that there is no need for them to opine on whether the devices actually work in real life. *See, e.g.*, Kopel Decl. Ex. 1, Borth Dep. at 274:9-19 (“[T]he claims on the label of this repeller don’t require that you have harborages or sofas or chairs or walls” so “even if the repellers don’t work in an environment where you have all [these things], the claims would still be correct because the packaging does not mention those items”). Rather, their testimonies are carefully worded so as to avoid making any opinions as to what would happen if the repellers were used in real life. *See* Kopel Decl. Ex. 3, Borth Report at 20 (“I opine that these scientific references do show that ultrasonic pest repellers repel insect pests **under the conditions in which the devices were tested.**”) (emphasis added). Allowing such testimony would be highly prejudicial to Plaintiffs and the Classes and would only serve to confuse the jury, which is tasked with making a determination as to whether the repellers work in the real world rather than in empty plexiglass enclosures.

For these reasons, and others detailed below, the testimonies of Dr. Borth and Dr. Whitford must be precluded.

II. THE LEGAL STANDARD FOR ADMISSIBILITY OF EXPERT TESTIMONY

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert and other scientific or technical expert testimony, and states:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

In determining whether expert testimony is admissible under Rules 702 and 403, and the Supreme Court's ruling in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993) and its progeny, the Court must assume a gatekeeper function to determine whether "the expert's testimony both rests on a reliable foundation and is relevant to the task at hand." *Daubert*, 509 U.S. at 597; accord *Campbell v. Metro. Prop. & Cas. Ins. Co.*, 239 F.3d 179, 184 (2d Cir. 2001). Although the *Daubert* analysis was initially developed to examine scientific testimony, *Daubert* applies with equal force to other types of expert testimony including that of economists. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999). The proponent of the testimony must establish admissibility by a preponderance of the evidence. *Bourjaily v. United States*, 483 U.S. 171, 175-76, 107 S. Ct. 2775, 97 L. Ed. 2d 144 (1987); *Astra Aktiebolag v. Andrax Pharms., Inc.*, 222 F. Supp. 2d 423, 487 (S.D.N.Y. 2002). The Court has broad discretion in determining whether to admit expert testimony. *Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256, 265 (2d Cir. 2002).

III. DR. BORTH AND DR. WHITFORD'S OPINIONS ON THE EFFICACY OF THE REPELLERS ARE INADMISSIBLE

As noted above, Dr. Borth and Dr. Whitford rely on seven Chinese Studies to support their opinions in this case:

(1) **Intertek Report 160419051GZU-002** tested the repellents against ants, spiders, and roaches ("Study 1"), *See* Kopel Decl. Ex. 18;

(2) **QMANN Report 10275-2** tested the repellents against mice, spiders, and roaches ("Study 2"), *see id.* Ex. 22;

(3) **QMANN Report 10275-1** tested the repellents against mice, spiders, and roaches ("Study 3"), *see id.* Ex. 23;

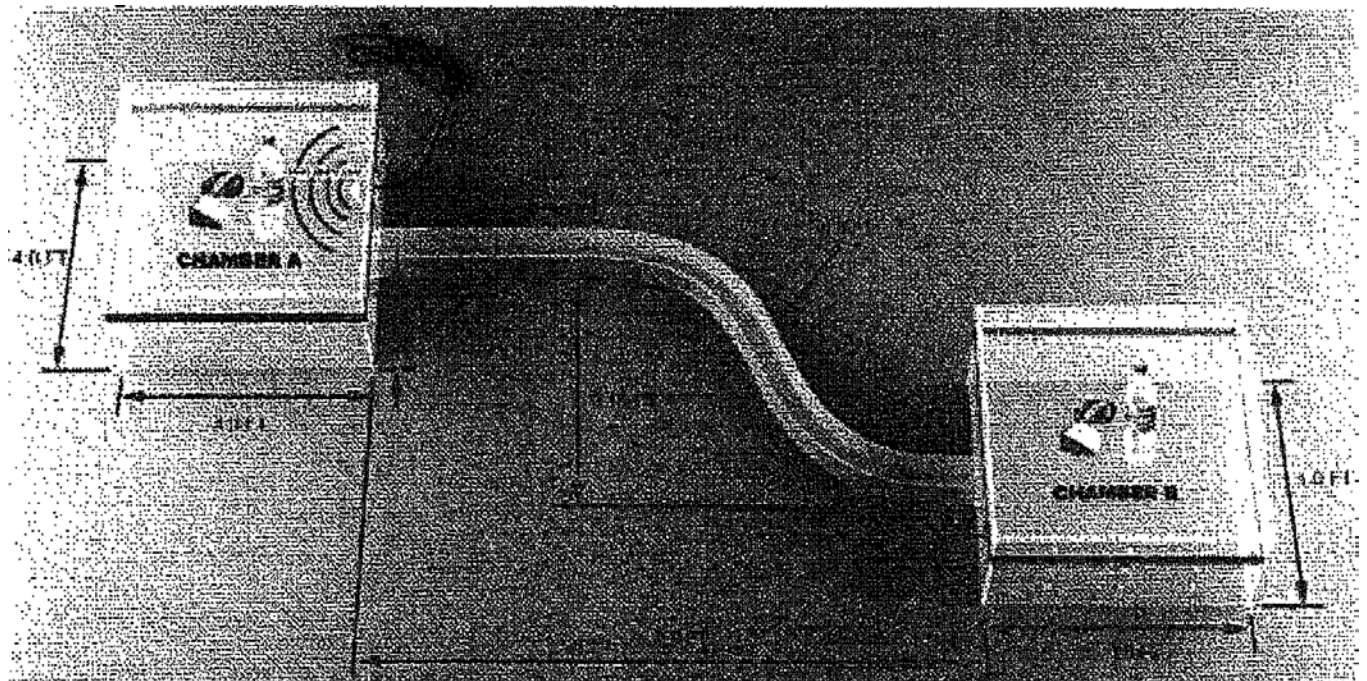
(4) **SGS Report SZXWT00603439** tested the repellers against ants, spiders, and roaches (“Study 4”), *see id.* Ex. 4;

(5) **Intertek Report 140515021GZU-002** tested the repellers against ants, spiders, and roaches (“Study 5”), *see id.* Ex. 5;

(6) **Intertek Report SZXWT00585081** tested the repellers against mice and rats (“Study 6”), *see id.* Ex. 20; and

(7) **Intertek Report 140515021GZU-001** tested the repellers against mice and rats (“Study 7”), *see id.* Ex. 6.

Each of the Chinese studies used a similar design in which pests were able to choose between two areas – one with an operational repeller and the other without. Studies 2 and 3 were conducted in empty Chinese dorm rooms and Studies 1, 4, 5, 6, and 7 were conducted using a pair of plexiglass cubes (Chamber A with the pest repeller and Chamber B without) connected by a narrow tunnel:



In forming his opinion regarding the efficacy of the Bell + Howell devices, Dr. Borth relies on Studies 1-5, as well as Ballard (1984), a published study examining other ultrasonic devices not manufactured by Bell + Howell. *See* Kopel Decl. Ex. 7.¹ Meanwhile, Dr. Whitford relies on Studies 6 and 7, as well as his own testing performed on the Bird-X Transonic Pro unit, an electronic pest repeller also made by a different manufacturer. As detailed below, each of these studies are not sufficiently reliable to support Borth and Whitford's opinions in this case.

A. The Chinese Studies Are Flawed And Unreliable

1. Seven Of Seven Chinese Studies Failed To Use Experimental Controls

First, seven out of seven studies failed to use "experimental controls." *See* Kopel Decl. Ex. 9, Potter Report ¶ 80. "[Y]ou have to have a control" because "without a control, as a matter of science, the data from a study is meaningless." Kopel Decl. Ex. 2, Whitford Dep. at 92:12-16. Here, each of the studies were performed with the repllers turned on, but were not performed for an equal amount of time with the repellers either not present or turned off. Therefore, it is impossible to know if any movement of the critters being tested was due to any effect of the repellers or some other factor. *See* Kopel Decl. Ex. 9, Potter Report ¶ 80; *see also Steigerwald v. BHH, LLC*, 2016 WL 6962593, at *7 (N.D. Ohio Nov. 29, 2016) (granting motion to exclude testimony of expert witness in Bell + Howell Ultrasonic Repeller case where expert "failed to use a 'control' to determine the ability of the devices to repel ants"); *Astra Aktiebolag v. Andryx Pharms., Inc.*, 222 F. Supp. 2d 423, 488 (S.D.N.Y. 2002) ("Failure to test for alternative causes or the use of control experiments may provide a basis for exclusion.").

¹ The study's full citation is J.B. Ballard, R.E. Gold, and T.N. Decker, *Response of German Cockroach (Orthoptera: Blattellidae) Populations to a Frequency Sweeping Ultrasound-Emitting Device*, J. Econ. Entomol. 77:976-979 (1984).

2. Five Of Seven Chinese Studies Tested Multiple Critters In The Same Enclosures At The Same Time

Second, five of seven studies tested multiples critters in the same enclosures at the same time: Studies 1 and 5 tested ants, spiders, and roaches together, Studies 2 and 3 tested mice, spiders and roaches together, and Study 4 tested ants and roaches together. *See* Kopel Decl. Exs. 4, 5, 18, 22 & 23. This was a serious problem. Since “mice eat cockroaches and spiders, and certain spiders prey upon cockroaches and ants, perceived repellency could have been from avoiding predators rather than the device.” Kopel Decl. Ex. 9, Potter Report ¶ 81. Notably, Dr. Borth also acknowledged that ants and roaches can affect each other’s movements as well. *See Id.* Ex. 1, Borth Dep. at 111:25-112:2 (“Q: Now, do you agree that ants and roaches can affect each other’s movements? A: They might.”).

When this topic came up at Dr. Whitford’s deposition, he called “the mixing of” animals “a catastrophic mistake in design.” Kopel Decl. Ex. 2, Whitford Dep. at 188:5-14. Because of this he expressly stated that Studies 2 and 3 are “unreliable.” *See id.* at 189:16-18 (“Q: And as a result, would you say that the data produced by [Studies 2 and 3] is unreliable? A: Absolutely.”). Based on the fact that Defendant’s own expert witness, Dr. Whitford, testified that Studies 2 and 3 are unreliable, the Court cannot allow him or Dr. Borth to present them to the jury under Rule 702.

But Dr. Whitford’s comments apply equally to Studies 1, 4, and 5 as well in that they are unreliable for the same exact reason. In fact, the text of Study 4 itself reads: “As spiders are larger and far more aggressive than ants and roaches, they can, and often do, kill smaller pests like ants and roaches. Therefore, the testing of spiders and ants/roaches must be conducted separately in different times.” Kopel Decl. Ex. 4. This is common sense – in tests seeking to monitor the movements of animals in order to measure the effects of the repellents, there should

be no other confounding variable affecting their movements. Dr. Borth also acknowledged the uncertainty of the data due to this problem:

Q: And it's possible [when] they're in the chamber together at the same time ... the spiders, roaches, and ants were affecting each other's movements within the chambers; correct?

A: It's possible, yes. We have no way of knowing.

Kopel Decl. Ex. 1, Borth Dep. at 176:1-8; *see also id.* at 107:9-12 ("As I said, I would not have designed an experiment ... and put spiders and roaches and ants in the chamber or the testing arena at the same time."). These studies must therefore be precluded due to lack of reliability.

3. Seven Of Seven Chinese Studies Were Not Replicated

Third, seven of seven studies were not replicated. *See* Kopel Decl. Ex. 1, Borth Dep. at 171:24-172:1 ("Q: And all the tests that we've reviewed so far have not been replicated; correct? A: Not in the true sense."). Dr. Borth testified regarding the importance of replication during his expert testimony in another case:

Q: ... [I]t's important to replicate results, right, when you're trying to figure out if something works?

A: Uh-huh. Yes.

Q: And it's important from a scientific standpoint, correct?

A: Yes.

Q: Something that's generally accepted in the scientific field?

A: Yes.

Kopel Decl. Ex. 10, Borth B&D Dep. at 109:6-12; *see also id.* Ex. 2, Whitford Dep. at 168:1-3 (in order to have an "adequate basis to make [a] claim" experiments need to be "repeated again and again."). That is why Dr. Borth testified he would have required testing that was "replicated" in order to "make a commercialization decision" in the course of his work at Dow.

See Kopel Decl. Ex. 1, Borth Dep. at 179:17-182:18. The lack of replication renders the Chinese Studies an unreliable basis to reach opinions of efficacy as a matter of science. See *Craker v. Sandoz Pharms. Corp.*, 188 F. Supp. 2d 1026, 1030 (S.D. Ill. 2001) (“The hallmark of [Daubert’s] reliability prong is the scientific method, *i.e.*, the generation of testable hypotheses that are then subjected to the real world crucible of experimentation, falsification/validation, and replication.”) (citing *Daubert*, 509 U.S. at 593). Here, the Chinese Studies were not replicated by the testing companies, and no attempts at replication were made by Defendant’s experts. Testimony based on the Chinese Studies must therefore be precluded.

4. Seven Of Seven Chinese Studies Failed To Specify The Species Being Tested

Fourth, seven of seven studies failed to specify which species of critters were being tested. See *id.* Ex. 1, Borth Dep. at 113:15-19 (“Q: What species were used in this test? A: They do not say. Q: Is it important to know what species they used? A: It would be helpful.”); *Id.* Ex. 2, Whitford Dep. at 201:20-22 (“Q: What species of mice was used in this test? A: They weren’t stated.”). Because the species tested were unknown, the tests are not even *capable* of replication. See *Id.* Ex. 1, Borth Dep. at 126:2-13 (“Q: Given that you don’t know the species of the pests used, would you be able to replicate this test if you wanted to? A: It would be ... coincidence I guess. ... I can certainly test roaches, I can test ants, and I can test spiders. Whether they’re exactly the same species, we don’t know since they – since they didn’t say.”). “Generally, when an expert’s experiments are conducted in a way that does not allow any other expert to replicate them, the expert’s conclusions are unreliable and should be excluded.” *Wyatt Tech. Corp. v. Malvern Instruments, Inc.*, 2010 WL 11505684, at *6 (C.D. Cal. Jan. 25, 2010) (“Dr. Cannell’s opinions and testimony based upon his tests of the unidentified antibody must be excluded under *Daubert* because they cannot be replicated or tested.”); see also *Lava Trading*,

Inc. v. Hartford Fire Ins. Co., 2005 U.S. Dist. LEXIS 4566, at *50 (S.D.N.Y. Feb. 14, 2005) (“An expert must offer good reason to think that his approach produces an accurate estimate using professional methods, and that estimate must be testable. Someone else using the same data and methods must be able to replicate the result.”); *Innis Arden Golf Club v. Pitney Bowes, Inc.*, 629 F. Supp. 2d 175, 190 (D. Conn. 2009) (precluding expert testimony where test “results could not be replicated or verified because the underlying data [wa]s not available”); *Hutchinson v. Hamlet*, 2006 WL 1439784, at *2 (N.D. Cal. May 23, 2006) (excluding expert opinion in part because expert “failed to record his data, so it cannot be reviewed or tested”). These tests are unreliable for this reason as well.

Notably, while no species were specified, photographs of Study 3 indicate that white laboratory mice were likely used. *See* Kopel Dec. Ex. 9, Potter Report ¶ 86. “Years of inbreeding have radically changed lab-reared mice from their wild ancestors, causing them to have different physiology and behavior. Consequently, they should never be used to predict performance of pest control products in the field.” *Id.* Dr. Whitford himself acknowledged the problem with using white mice. *See id.* Ex. 2, Whitford Dep. at 116:15-18 (“Q: So would it be reasonable to surmise that they might react to ultrasound differently than other types of mice? A: White lab mice, probably so.”). Thus, Study 3 is invalid for this additional reason.

5. Three of Seven Chinese Studies Used Protocols Where Dead Critters Were Replaced In The Middle Of Testing

Fifth, three of seven studies, Studies 1, 2, and 5, used a protocol where the people conducting the test replaced dead critters with new live ones in the middle of the test, and did not record or explain whether the new live ones were placed in the repeller or non-repeller areas of the tests. *See id.* Ex. 1, Borth Dep. at 139:22-23 (“Q: Which chamber were they put in? A: It’s not readily apparent.”). This was highly improper and made the data from the tests impossible to

interpret. *See* Kopel Decl. Ex. 2, Whitford Dep. 235:23-241:8 (testifying that replacing dead critters with live ones mid-experiment “would not be proper” and that “[a] scrupulous scientist would not” do that); *id.* Ex. 1, Borth Dep. at 138:17 (“I would not have done that.”). Dr. Borth agreed that this practice skewed the test results given that it remains unknown where the new pests were added:

Q: Do you agree that had ... these new pests been added to Chamber B, that would skew the test results?

A: Had they been – yes, but the degree to which I don’t know.

...

Q: But you haven’t done the calculations to figure that out; have you?

A: ... I did not take into account the quantity lost as they describe it.

Id. at 147:23-148:14. No conclusions can therefore be reliably drawn from the data in these studies. *See Daubert*, 509 U.S. at 565 (in determining reliability, “the court ordinarily should consider the known or potential rate of error”).

6. Five Of Seven Chinese Studies Improperly Counted Critters In Neither Chamber As “Repelled”

Sixth, the five of seven studies, Studies 1, 4, 5, 6, and 7, were conducted in empty plexiglass containers connected by a tunnel. *See* Kopel Decl. Exs. 4, 5, 6, 18 & 20. These studies were unreliable because the people conducting the tests either explicitly counted pests found in the tunnel as being “repelled” or did not specify whether they were doing so. This was also improper. When questioned about this practice, Defendant’s expert witness, Dr. Whitford, was emphatic that “the tunnel itself should be considered the tunnel” and “should not be considered Chamber B.” Kopel Decl. Ex. 2, Whitford Dep. at 234:1-9. And while many peer-reviewed studies examining the effects of ultrasonic devices utilized similar setups with

cubes connected by a tunnel, every single one of them either discounted critters found in the tunnel, or counted them as a separate category:

- **Koehler (1986).** *See id.* Ex. 1, Borth Dep. at 200:2-201:22 (“Q: ... Dr. Koehler did not count the corridor as being repelled correct? A: He treated it as third category. Q: So that’s a yes, he did not count it as being repelled, correct? A: He didn’t say as such, no. Q: And this is a peer reviewed article, correct? A: Yes.”);²
- **Huang and Subramanayam (2006).** *Id.* at 247:21-248:8 (Q: Okay. So do you understand based on this, that the insects found in the corridors were not counted as repelled in this study? A: Based on that sentence, that’s what I would assume. ... Q: And that aspect of the protocol also was necessarily approved through the scrutiny of the peer review process; correct? A: Yes ...”);³
- **Ahmad (2006).** *Id.* at 253:5-8 (“Q: So do you understand based on this, that in this test the cockroaches found in the conduits connecting the chambers were not counted as repelled? A: That’s what they said, yes.”).⁴

This is the manner in which all peer-reviewed studies were conducted – critters found in the corridor/tunnel were never counted as repelled:

Q: ... We’ve looked at several peer-reviewed articles in which insects found in the conduit were not labeled as repelled; correct

A: Yes.

² The full citation for this study is: Philip G. Koehler et. al., *Efficacy of Ultrasound for German Cockroach (Orthoptera: Blattellidae) and Oriental Rat Flea (Siphonoptera: Pulicidae) Control*, J. Econ. Entomol. 79:1027-1031 (1986). A copy of the study is attached as Exhibit 11 to the Kopel Decl.

³ The full citation for this study is: Fangnent Hunang and Bhadriraju Subramanayam, *Lack of Repellency of Three Commercial Ultrasonic Devices to the German Cockroach (Blattodea: Blattellidae)*, Insect Science (2006) 13, 61-66. A copy of the study is attached as Exhibit 12 to the Kopel Decl.

⁴ The full citation for this study is: Aqueel Ahmad et al., *Responses to Mosquitoes and German Cockroaches to Ultrasound Emitted from a Random Ultrasonic Generating Device*, Entomologica Experimentalis et Applicata 12: 25-33 (2006). A copy of the study is attached as Exhibit 13 to the Kopel Decl.

Q: Okay. Sitting here today can you name a single publication in which the insects found in the conduit were counted as repelled?

...

A: I can't today, you know, without doing a full literature search, describe or enumerate any publication that counted.

Q: Having reviewed these publications, would you agree that it's generally accepted in the field as an acceptable practice to not label insects found in the conduit as repelled?

A: In these publications that we reviewed today, it appears that way."

Id. at 253:19-254:19. Thus, this practice was completely disclaimed by Dr. Whitford. And every single peer-reviewed study utilizing this design counted the tunnel *separately* and did not count critters in the tunnel as being repelled. These studies must therefore be precluded.

7. Seven Of Seven Chinese Studies Failed To Use Harborage Or Otherwise Replicate Real-World Conditions

Seventh, seven of seven studies failed to provide any sort of harborage to the critters being tested. Areas of harborage, where pests can seek shelter and feel protected, is a necessity of life for these critters, and the critters specifically place their nests in these spaces (furniture, pantries, inside walls, and under floors, etc.) inside peoples' homes:

Q: Where do insects typically nest inside of the house?

A: Any place that suits their requirements.

Q: And what's that?

A: ... I would put ... a list together. It would be safety, they need food, they need water, and they are born to breed.

Q: What do you mean by safety?

A: Oh, they feel protected.

Q: So they prefer ... to nest in a place with harborage correct?

A: Well, cockroaches and ants do, which are the case here.

Q: And those are the areas where ... the Bell + Howell repellers cannot reach; correct?

A: Ultrasound cannot reach them. ...

Kopel Decl. Ex. 1, Borth Dep. at 267:17-268:12. These tests, which were run in areas devoid of the types harborage which is typically found in houses and offices, are simply not probative of what would occur if the repellers were used in real-world conditions. They therefore fail to “help the trier of fact ... determine a fact in issue.” Fed. R. Evid. 702(a).

B. Dr. Borth’s Reliance On Ballard (1984) Is Improper Because The Authors Of That Study Were Themselves Unwilling To Conclude That Causation Had Been Proven

Dr. Borth also relies on a peer-reviewed study, Ballard (1984), in reaching his conclusion that the devices are effective to repel pests. *See* Kopel Decl. Ex. 3, Borth Report at 6-7. However, this was improper because, as explained below, the authors of this study expressly stated that their data did not support this conclusion.

Borth states that Ballard (1984) found that cockroach “activity was increased by the active ultrasound-emitting device.” *Id.* at 7. But this ignores the findings the study’s authors themselves, who stated that “the biological importance of these observations is difficult to interpret” and “there was no evidence that either control or repulsion of German cockroach populations occurred as a result of ultrasound.” *See id.* Ex. 7, Ballard (1984) at 979 and Ex. 8, Gold (1984)⁵ at 1507.

“It is axiomatic that causation testimony is inadmissible if an expert relies upon studies or publications, the authors of which were themselves unwilling to conclude that causation had

⁵ The full citation for this study is R.E. Gold et al., *Acoustical Characterization and Efficacy Evaluation of Ultrasonic Pest Control Devices Marketed for Control of German Cockroaches (Orthoptera: Blattellidate)*, J. Econ. Entomol. 77:15707-1512 (1984).

been proven.” *Huss v. Gayden*, 571 F.3d 442, 459 (5th Cir. 2009); *see also Happel v. Wal-Mart Stores, Inc.*, 602 F.3d 820, 826 (7th Cir. 2010) (same); *General Elec. Co. v. Joiner*, 522 U.S. 136, 145-46 (1997) (finding no abuse of discretion in district court’s refusal to consider probative a study whose authors “were unwilling to say that ... exposure [to the chemical at issue] had caused [the plaintiff’s disease] among the workers they examined”); *McClain v. Metabolife Int’l Inc.*, 401 F.3d 1233, 1248 (11th Cir. 2005) (expert showed a “lack of scientific rigor” when he used published study to “draw[] unauthorized conclusions ... the authors of the study do not make”); *Leblanc v. Chevron USA Inc.*, 396 F. App’x 94, 100 (5th Cir. 2010) (“The district court properly rejected the studies as supporting causation because the authors of the studies concluded that there was no proof of causation.”); *In re Accutane Prods. Liab. Litig.*, 2009 WL 2496444, at *2 (M.D. Fla. Aug. 11, 2009) (“[W]hen an expert relies on the studies of others, he must not exceed the limitations the authors themselves place on the study”). Here, Dr. Borth should not be permitted to opine that ultrasound will cause repulsion of insects based on a study whose own authors stated showed “no evidence [of] repulsion.” *See* Kopel Decl. Ex. 7, Ballard (1984).

C. Dr. Whitford’s Reliance On His Testing Of the Bird-X Transonic Pro Is Improper

As noted above, aside from the Chinese Studies, Dr. Whitford also bases his opinion that the Bell + Howell repellents are effective on his testing of the Bird-X Transonic Pro, a separate electronic pest repeller, for its efficacy against mice in his own farmhouse. *See* Kopel Decl. Ex. 14 (Transonic Pro study). In his study, Dr. Whitford positioned the Transonic Pro unit facing the entry point into his basement, and found that he captured zero mice when the device was activated during 2009, compared with 32 mice which he captured with the device turned off in 2010. *See id.*, Abstract Section (no page or paragraph numbers included). However, Dr.

Whitford's Transonic Pro study is an improper basis of his opinions concerning the Bell + Howell devices for two reasons.

First, as with the Chinese Studies, there was no control performed in Dr. Whitford's study, other than comparison between the results he saw in 2009 and 2010. But "[i]n time-sequence trials such as this one, 'before' is not a control on 'after' because treatment is confounded with time Untreated control sites should be monitored concurrently with treated sites; otherwise, difference like those observed in this study could have been due to non-treatment factors, in particular, natural yearly fluctuations in rodent abundance." Kopel Decl. Ex. 15, Potter Rebuttal Report ¶ 57. This is particularly relevant in this case, given that "January 2009 was so cold it ranked as the coldest January since 1994, with extreme wind chill values down to -30°F to -45°F" in the area of Dr. Whitford's farmhouse. *See id.* ¶ 58. "Considering the extreme effect severe winters can have on white-footed mouse populations later in the year, numbers may have been intrinsically lower in 2009 (when the device was on), than in 2010 (when the device was off). Thus, fewer mice entering in the house while the device was operational could simply have been a result of fewer mice outdoors in nature." *Id.* That is why a simultaneous control is so important – it is impossible to tell whether the results observed by Dr. Whitford were due to the Transonic Pro or due to any other factor which may have affected mouse populations.

Second, the technology used by the Transonic Pro unit is not comparable to the technology used by the Bell + Howell devices because the Transonic Pro emits sonic and ultrasonic sound waves, whereas the Bell + Howell devices only emit ultrasonic sound waves. *See* Kopel Decl. Ex. 16 (Transonic Pro instructions). Thus, it is impossible to tell whether the sonic or ultrasonic components (or both) used by the Transonic Pro were relevant to the results

observed by Dr. Whitford. Because the Transonic Pro unit is not an apples-to-apples comparison with the Bell + Howell devices in terms of the sound output, results from testing of the Transonic Pro cannot reliably be used to form opinions on the efficacy of the Bell + Howell devices.

D. Chart Summarizing Issues With Studies Relied Upon By Borth And Whitford

The following chart summarizes the issues with each of the studies relied upon by Defendant's expert witnesses:

	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Ballard (1984)	Transonic Pro Study
No untreated experimental control	x	x	x	x	x	x	x		x
No replication	x	x	x	x	x	x	x		x
Failed to note species	x	x	x	x	x	x	x		
Used white lab mice			x						
Tested multiple critters in same enclosures at same time	x	x	x	x	x				
Data is "unreliable" according to Dr. Whitford		x	x						
Replaced dead critters in middle of testing	x	x			x				
Counted tunnel as "repelled"	x			x	x	x	x		
No harborage	x	x	x	x	x	x	x	x	
Conclusion conflicts with authors of study								x	
Device tested uses sonic sound waves									x

IV. OTHER OPINIONS EXPRESSED BY DR. BORTH ARE INADMISSIBLE

Although Dr. Borth is an entomologist, he purports to provide expert opinions on a wide variety of additional topics unrelated to his field of expertise. For the reasons set forth below, these opinions are improper and must also be precluded.

A. Dr. Borth Expresses No Admissible Opinions On Consumer Understanding

Defendants' pre-motion letter states that "Defendants' experts, qualified in the area of writing and approving product literature, have testified ... that it is unreasonable to interpret the phrase 'drives pests out' to mean drives pests out of buildings" ECF No. 120 at 3.⁶ This is completely wrong. Dr. Borth never gave the referenced testimony – in fact, he said the complete opposite. Regardless, Dr. Borth would have been unqualified to present any such opinions, and examined no facts or data which would have permitted him to do so.

First, Dr. Borth's initial and rebuttal expert reports in this case never once purported to provide an opinion on consumer interpretation of the phrase "drives pests out." The phrase appeared zero times in his initial report, and he states only in his rebuttal report that "there is no mention or claim of driving pests out 'of buildings,'" without any reference to reasonableness of interpretation whatsoever. *See* Kopel Decl. Ex. 17, Borth Rebuttal Report at 19.

⁶ As detailed in § II.B of Plaintiffs' motion for class certification (ECF No. 71), Defendants unambiguously represented to all class members that the repellents would drive pests out of the house. *See also* 7/7/17 Order Granting Class Certification at 5 (ECF No. 93) ("The alleged misrepresentations at issue – namely that the pest repellents can drive out certain pests from the home – also form the basis of the breach of warranty claim."). However, Defendants are now trying to argue that the phrase "Drive Pests Out," which appeared on the repellents' retail packaging, referred solely to the "area where ultrasonic sounds can reach the pests." *See* Defs.' 1/29/18 Letter (ECF No. 120) at 3. That is circular, senseless, and contrary to the testimony of Debbie Feuerstein, the person who actually wrote the claim in the first place. *See* Kopel Decl. Ex. 19, Feuerstein Dep. at 56:3-21; 58:9-11 ("Q: Oh, so it means it drives pests out from the home? A: Right, right."). While a complete discussion of this topic is beyond the scope of this motion, Plaintiffs anticipate briefing this issue in further detail in their opposition to Defendants' forthcoming motion for summary judgment.

Then, when questioned about this topic at his deposition, Dr. Borth expressly stated he thought that it *was* reasonable for consumers to understand the claim to refer to people's houses:

Q: Do you think it ... is unreasonable for a consumer to understand drives pests out to mean drives pests out of the house?

A: I do not.

Q: You think that is a reasonable interpretation?

A: I sure do.

Kopel Decl. Ex. 1, Borth Dep. at 46:19-25. Dr. Borth should not now be permitted to testify that consumers would have understood differently, given that this opinion was never expressed in his reports and was expressly contradicted by his deposition testimony.

Regardless, Dr. Borth has no qualifications whatsoever in the fields of marketing or consumer preference:

Q: Are you an expert on consumer preference?

A: No.

Q: Are you an expert on marketing?

A: I've not been employed as a marketer.

...

Q: Do you hold any degrees or certifications in marketing?

A: No, I do not.

Q: Have you ever taught any courses in marketing?

A: No, I have not.

Kopel Decl. Ex. 1, Borth Dep. at 14:13-16:11. He also collected no facts or data at all to support any expert testimony regarding how consumers understood any claims on the packaging. *See id.* at 307:16-18 ("Q: Did you ... ever ask a single consumer how they understood these claims? A:

No.”). Any expert testimony by Dr. Borth on this topic would therefore be inadmissible under *Daubert*. See *Playtex Prods., Inc. v. Procter & Gamble Co.*, 2003 WL 21242769, at *10 (S.D.N.Y. May 28, 2003) (Pauley, J.) (precluding expert testimony that “the vast majority of women will not feel a well-designed tampon upon proper insertion based solely on [the witness’s] own experience ... and not on any survey or scientific study.”) (internal quotations omitted).

B. Dr. Borth’s Additional “Opinions” Are Inadmissible Because They Are Not Based On Any Specialized Knowledge and They Are Not Helpful To The Trier Of Fact

1. Opinion No. 2

Dr. Borth states that “it is my opinion that regardless of which B+H Ultrasonic Pest Repeller Item Number was purchased, it would have contained the same basic set of instructions as those called out for Item Number 50105CD in the previous section.” Kopel Decl. Ex. 3, Borth Report at 6.

Dr. Borth is not qualified to make this opinion because it has nothing to do with entomology. See *Arista Records LLC v. Lime Grp. LLC*, 2011 WL 1674796, at *2 (S.D.N.Y. May 2, 2011) (“[a]n expert who is qualified in one field cannot offer an opinion about aspects of the case in another field for which she is not qualified.”). Moreover, any instruction included in the packaging of the repellents is a matter of factual evidence, not expert opinion. Opinion No. 2 must therefore be precluded.

2. Opinion No. 6

Dr. Borth states that changing the text on the Repellers’ packaging and changing item specifications are choices that “are within the purview of the company and, in my opinion, while capable of being criticized by outside entities, remain with the company” and that “the Owner’s Manual evolved over time from its first customers.” Kopel Decl. Ex. 3, Borth Report at 10. This

opinion also has nothing to do with entomology. *See Arista Records LLC*, 2011 WL 1674796, at *2 (“[a]n expert who is qualified in one field cannot offer an opinion about aspects of the case in another field for which she is not qualified.”). Moreover, Opinion No. 6 is irrelevant because it does not pertain to whether the Repellers work. Opinion No. 6 is irrelevant and should therefore be excluded. *See Daubert*, 509 U.S. at 591 (“Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.”).

3. Opinion No. 7

Dr. Borth states that “[i]t is ... my opinion that [Plaintiff Hart] was derelict in her end-user obligation to explicitly follow the instructions provided by the ENTITIES on proper use to obtain the desired result.” Kopel Decl. Ex. 3, Borth Report at 12. However, this is a legal conclusion, and “expert testimony that expresses a legal conclusion must nonetheless be excluded.” *Hewitt v. Metro-N. Commuter R.R.*, 244 F. Supp. 3d 379, 393 (S.D.N.Y. 2017); *see also Hygh v. Jacobs*, 961 F.2d 359, 363 (2d Cir. 1992).

Finally, Dr. Borth states that “[i]n my opinion, [Ms. Hart] was satisfied with the product performance until such time as she read a mailer from an attorney claiming they were ineffective.” Kopel Decl. Ex. 3, Borth Report at 12. However, this testimony should be excluded as Dr. Borth stated this opinion is based on based on his purported “common sense,” rather than any sort of scientific or technical expertise. *See* Kopel Decl. Ex. 1, Borth Dep. at 284:8-19 (Q: Now, you’ve expressed some opinions here in which you stated that you thought the testimony by the plaintiffs were indicative of satisfied customers. A: Yes, that’s back in the original report Q: Is that opinion based on scientific, technical, or other specialized knowledge, or do you think that’s common sense based on reading the transcript? A: It’s – it’s my common sense.). Such opinions are not admissible under Fed. R. Evid. 702. *See In re Mirena IUD Prods. Liab. Litig.*, 169 F. Supp. 3d 396, 484 (S.D.N.Y. 2016) (precluding expert

testimony where the witness was “not basing her opinions on an analysis of data or studies, but rather on what she describe[d] as a ‘logical concept,’ which does not pass muster under Rule 702 or *Daubert*. If her opinion is based on simple common sense, it is not helpful; the jury does not need expert opinion because its common sense will suffice.”).

4. Opinion No. 9

Dr. Borth states that “[i]n my opinion, Ms. Hart’s general attitude toward insect pest control in her home is one of reasonable tolerance.” This does not pertain to entomology and thus Dr. Borth is not qualified to opine on Ms. Hart’s “general attitude.” *See Arista Records LLC*, 2011 WL 1674796, at *2 (“[a]n expert who is qualified in one field cannot offer an opinion about aspects of the case in another field for which she is not qualified”). It is also completely irrelevant to the merits of this case.

Dr. Borth also states that “Ms. Hart is experienced at returning items that ‘don’t work,’ such as the printer from QVC. If [Ms. Hart] was not satisfied with the B+H Ultrasonic Pest Repellers that she purchased, why did she not return them of her own volition? Since she did not, I surmise that she was satisfied with the B+H Pest Repellers that were in use in her home.” Kopel Decl. Ex. 3, Borth Report at 14. This is an improper effort by Dr. Borth to cast aspersions on the motivations of Ms Hart. First, Dr. Borth conceded that this opinion based on his purported “common sense,” rather than any scientific or technical expertise. *See supra* Section IV.B.3 (quoting Borth Depo. at 284); *In re Mirena IUD Prods.*, 169 F. Supp. 3d at 484 (opinions based on common sense “do not pass muster under Rule 702 or *Daubert*”). Furthermore, whether Ms. Hart is “experienced at returning items” is irrelevant and has nothing to do with entomology. *See Daubert*, 509 U.S. at 591 (“Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.”); *see also Arista Records LLC*, 2011 WL

1674796, at *2 (“[a]n expert who is qualified in one field cannot offer an opinion about aspects of the case in another field for which she is not qualified.”).

5. Opinion No. 12

Dr. Borth states that “Ms. Bueno did not specifically testify in her deposition that she either was or was not satisfied with the Pest Repeller” and that “[i]n my opinion, her behavior suggests that she was satisfied with the B+H Ultrasonic Pest Repeller performance until such time as she received an email about the product from her attorney.” Kopel Decl. Ex. 3, Borth Report at 18. Here too, this is an improper effort by Dr. Borth to cast aspersions on the motivations of Ms Bueno. Dr. Borth is not qualified to opine on Ms. Bueno’s behavior or motivations. It has nothing to do with entomology and is irrelevant to the case. *See supra* Section IV.B.3. Thus, Opinion No. 12 should be excluded. *See Arista Records LLC*, 2011 WL 1674796, at *2 (“An expert who is qualified in one field cannot offer an opinion about aspects of the case in another field for which she is not qualified.”); *In re Mirena IUD Prods.*, 169 F. Supp. 3d at 484 (opinions based on common sense “do not pass muster under Rule 702 or *Daubert*”).

V. CONCLUSION

For the reasons set forth above, Plaintiffs respectfully request that the Court preclude the expert testimonies of Dr. Borth and Dr. Whitford.

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Respectfully submitted,

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